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FREQUENCY OF HEALTH EXAMINATIONS IN 9,000 FAMILIES, BASED ON NATION-WIDE PERIODIC CANVASSES, 1928–1931 *

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Health examinations have been widely advocated in recent years as a means of early diagnosis of incipient pathological conditions. Early attention to minor diversions from the normal may be a means of preventing the development of serious disease. The Bulletin of the Chicago Tuberculosis Sanitarium (2) says: "The correction of defects, periodic examinations, and general health survey are immensely important in the care of children exposed to tuberculosis." In a discussion of the care of cancer patients, Quick (13) says: "Routine health examinations, carefully and seriously done, will contribute greatly toward early diagnosis of many malignant growths."

Many reports have been made on the number and kind of defects found on physical examination of school children (4, 9, 10), and a few similar studies cover adults (1, 6, 15); but data are lacking on the proportion of persons, particularly of adults, who have an examination in the course of a year.

* From the Office of Statistical Investigations, U.S. Public Health Service. This is the second of a series of papers on sickness and medical care in this group of families (5). The survey of these families was organized as the basic investigation of the Committee on the Costs of Medical Care. After the records had been accumulated by the committee, a cooperative arrangement between the committee and the Public Health Service was made and the data were tabulated under the joint supervision of the Office of Statistical Investigations and members of the research staff of the committee. Committee publications based on the results are to deal primarily with costs and Public Health Service publications primarily with the incidence of illness and the extent and kind of medical care, without regard to cost. As costs are meaningless without the extent and nature of the service received, there will inevitably be some overlapping.

Grateful acknowledgment is made for advice and assistance received in the course of the study from various members of the research staff of the Committee on the Costs of Medical Care, particularly Dr. I. S. Falk and Miss Margaret C. Klem, and from members of the statistical staff of the Public Health Service. Special thanks are due to Miss Lily Vanzee, who was in immediate charge of tabulating the data.

SOURCE AND CHARACTER OF DATA

In connection with the study of illness in canvassed families in 130 localities in 18 States that was made by the Committee on the Costs of Medical Care and the United States Public Health Service (5, 7), all service received from physicians or other practitioners was recorded, whether for illness, physical examination, immunization, or other reason. The records of all types of physical examinations, both in and out of school and for persons of all ages and both sexes, afford data on the extent of medical examinations in the course of a year in a fairly representative general population group. The composition and characteristics of this group of 8,758 families who were kept under observation for 12 consecutive months in the years 1928–31 have already been considered in some detail in the report on illness (5). These families, including a total of 39,185 individuals, resided in 18 States, representing every geographical section. Every size of community was included, from metropolitan districts to small industrial and agricultural towns and rural unincorporated areas. Although not identical with the general population, the persons in the observed families were fairly typical with respect to age and sex distribution, percentage native born, and percentage married. With respect to income, their distribution was reasonably similar to the estimated distribution of the general population of the United States at the time of the survey.

TOTAL MEDICAL CARE

In a sense every visit to a physician may be considered a check-up of the physical condition of the person. The extent to which this is true depends upon the thoroughness with which the physician examines his patient to make a diagnosis of the symptoms that caused him to consult the doctor. During the 12 months of the observation record for these families, 48 percent of the individuals in the group received from a physician some care for illness, a physical examination, an immunization, or some other kind of professional service. Considering the services of dentists and optometrists or opticians as well as physicians, 62 percent of the population under observation had some medical, dental, or eye care in the course of the year.[1] It may be assumed, however, that dentists, optometrists, and opticians gave little or no consideration to the general physical condition of their patients, as it would hardly fall within the scope of their professions. Also, a physician in making a vaccination or other immunization would

[1] The percentage of the population which had certain services during the year varies considerably with income. For example, 43 percent of the members of families having a total annual income of less than $1,200 had the service of a physician as against 67 percent in families with an income of $10,000 or more; similarly the percentage of individuals having dental care ranged from 10 percent in the income class under $1,200 to 60 percent in the class of $10,000 and over, and the percentage of individuals having no medical, dental, or eye care ranged from 47 percent for the income class under $1,200 to 14 percent for families with $10,000 and over. For more details on the variation in service received by different income groups, see publications of the Committee on the Costs of Medical Care (7, 8).

probably consider the patient's general condition only in rare instances of extreme ill health; and the same may often be true in many minor illnesses.

To state the matter of professional care in the negative way, 52 percent of the observed population received no service from physicians for any purpose and 38 percent received no service from physicians, dentists, optometrists, or opticians during the year.

FREQUENCY OF EXAMINATIONS OF DIFFERENT TYPES

The present paper considers only examinations of apparently well persons for presumably preventive purposes and excludes all procedures made for the purpose of diagnosing a case of illness. Such examinations of well persons are far less frequent in the general population than medical attendance upon illness. Health examinations are divided into "complete examinations", in which some consideration was presumably given to all parts of the body, and "check-up examinations", in which certain organs of the body (such as chest, lungs, nose, throat, kidneys) were given special consideration and other parts were given secondary or possibly no consideration. The designation "complete examination" has no reference to the thoroughness or care with which the work was done, for many of the examinations so classified appear to be of a very cursory nature.

In the total surveyed group there were during the year 78.4 complete examinations per 1,000 persons under observation (table 1). In addition, there were 12.5 examinations to check up particular parts or organs of the body, exclusive of 21.9 cases of prenatal care,[2] 6.3 post-partum [2] examinations, and 39.6 eye refractions per 1,000 total population. Prenatal care often included several examinations, but in the above statement the series of check-ups is counted as a single case.

The complete examination rate of 78.4 per 1,000 consisted of 24.3 cases per 1,000 of infant and child supervision, 26.5 school examinations, 13.6 other examinations (outside of school) of school and preschool children, and 14.0 other examinations of adults and older children not reported as attending school,[2] including examinations at any age for insurance. In a later section examination rates will be considered for children of specific ages whether made in or out of school. For infants under 1 year of age there were frequently several examinations in the program of well-baby care, but the whole series is counted as a single case in this paper. The number of consultations per examination, which will be considered later, indicates how many visits, on the average, were included in the series.

[2] Rates are computed as per 1,000 total population as a measure of the extent of each kind of examination or check-up in the total group, even though some of the categories refer only to specific groups, viz, pregnant women, infants, school children, etc.

TABLE 1.—*Physical examinations of various kinds per 1,000 persons in canvassed white families in 18 States during 12 consecutive months, 1928–31*

Kind of examination	Examinations per 1,000 total population per year					Number of examinations				
	All ages			Both sexes		All ages [1]			Both sexes	
	Both sexes	Male	Female	Under 20	20 and over	Both sexes [1]	Male	Female	Under 20	20 and over
Total complete and check-up examinations	90.9	84.0	97.5	144.7	39.2	3,502	1,588	1,913	2,727	765
Complete examinations	78.4	74.2	82.4	132.4	26.6	3,021	1,403	1,617	2,495	519
School examinations of school and preschool children	26.5	23.7	29.2	53.3	.9	1,022	448	574	1,004	18
Other examinations of school and preschool children	13.6	13.0	14.2	27.5	.2	523	245	278	519	4
Infant and child supervision	24.3	25.2	23.4	49.8	------	938	477	460	938	------
Examinations for insurance	2.2	3.1	1.3	.7	3.6	84	58	26	13	71
Other examinations of older children and adults	11.8	9.3	14.2	1.1	21.8	454	175	279	21	426
Check-up of certain organs or parts of the body	12.5	9.8	15.1	12.3	12.6	481	185	296	232	246
Examination of tuberculosis contacts	3.06	2.54	3.57	4.93	1.28	118	48	70	93	25
Chest or other part of respiratory tract except nose and throat	2.05	1.48	2.60	2.23	1.85	79	28	51	42	36
Check-up or series of check-ups of an arrested tuberculosis case	.93	.58	1.27	.58	1.28	36	11	25	11	25
Nose and throat check-up	1.01	.95	1.07	1.38	.67	39	18	21	26	13
Kidney and urinary system	1.43	1.38	1.48	.85	2.00	55	26	29	16	39
Genital organs, including Wassermann tests	.80	.37	1.22	.27	1.33	31	7	24	5	26
Heart and circulatory system	.47	.53	.41	.27	.67	18	10	8	5	13
Cancer, diabetes and other general noninfectious diseases	.47	.32	.61	.21	.72	18	6	12	4	14
Ear	.31	.16	.46	.32	.31	12	3	9	6	6
Communicable disease contacts	.31	.21	.41	.58	.05	12	4	8	11	1
Orthopedic cases	.29	.32	.25	.21	.36	11	6	5	4	7
Other and ill-defined conditions	1.35	.95	1.73	.48	2.10	52	18	34	9	41
Population (years of life)	------	------	------	------	------	38,544	18,896	19,627	18,846	19,511

[1] "All ages" includes a few of unknown age; "both sexes" includes a few of unknown sex.

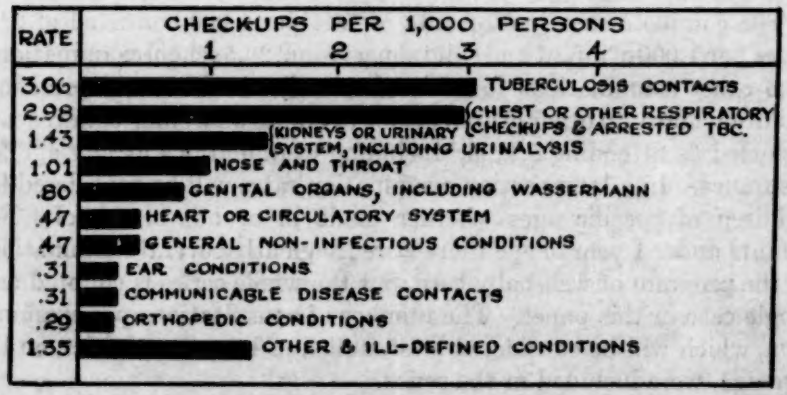

FIGURE 1.—Check-up examinations for specific conditions per 1,000 total population—canvassed white families in 18 States during 12 consecutive months, 1928–31.

The check-up examinations were made for a variety of reasons, but the preponderance relates to the chest or lungs, although a fairly small proportion is actually designated as check-ups to determine whether tuberculosis is present. Of the total of 12.5 check-ups per 1,000 population, 6, or nearly half, had some relation to tuberculosis. Of these, 3.1 per 1,000 were examinations of contacts of tuberculosis, 2 were examinations of the chest or lungs or other part of the respira-

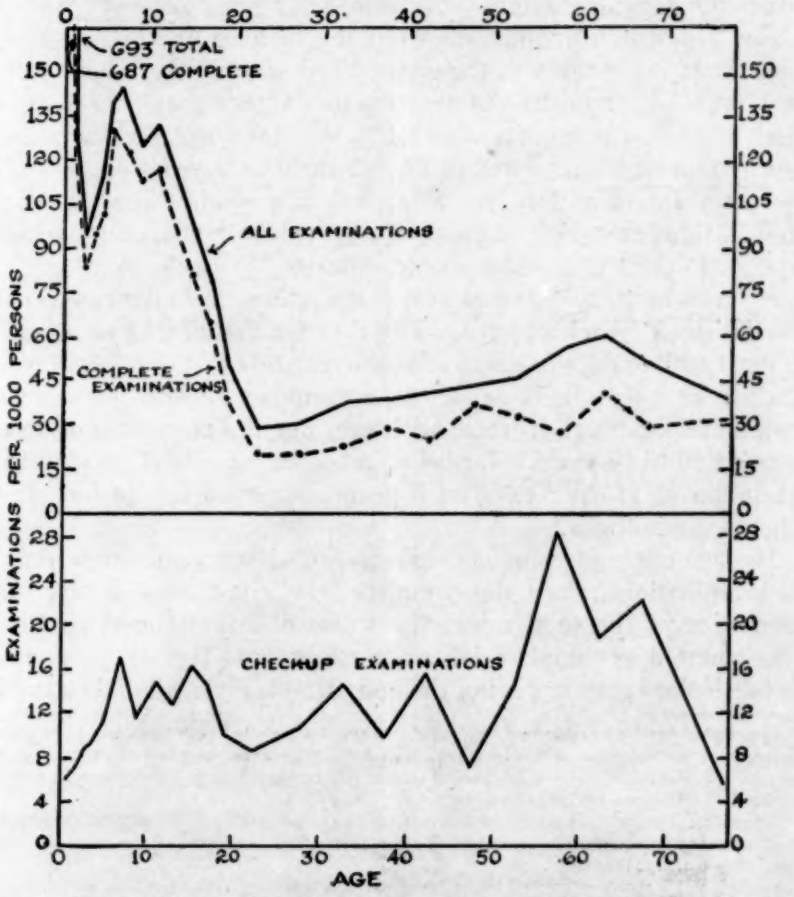

FIGURE 2.—Physical examinations per 1,000 persons of specific ages—canvassed white families in 18 States during 12 consecutive months, 1928–31.

tory tract except the nose and throat, and 0.9 per 1,000 were check-ups or a series of check-ups on arrested cases of tuberculosis. In addition, check-ups on the nose and throat amounted to 1 per 1,000 population. The check-ups on the kidneys or urinary system (including urinalysis without other information as to the reason for check-up) amounted to 1.4 per 1,000. Figure 1 shows graphically the frequency of the various types of check-up examinations.

FREQUENCY OF EXAMINATIONS AT DIFFERENT AGES

Table 2 and figure 2 show the examinations per 1,000 persons of each age, the ages under 8 being in single years and those from 8 to 19 in 2-year groups. It will be seen that the examination rates for children under 1 year of age are far greater than at any other age. It must be remembered that every community represented in this study had one or more visiting nurses, and infant care was probably an important part of the nursing program. The rate of 693 examinations [3] per 1,000 infants is not greatly different from the findings of a White House Conference (12) Survey of 156 cities, which showed that about half of the infants have a health examination by the time they are a year old. After infancy, examinations are much less frequent, reaching a minimum for preschool children of 94 per 1,000 at 2 years of age. The frequency increases for ages 3, 4, and 5, probably because of the examinations preceding entrance into school, with a second maximum rate of 145 per 1,000 for 6-year-old children. With the exception of a small peak at 10 to 11 years of age, there is a declining rate for the remainder of the school ages. The rate for the 20–24 year group is 29 per 1,000, or only one fifth of the 6-year rate and one fourth of the 12–13 year rate. In the adult ages there is a general tendency for examination rates to increase with age, but the maximum of 60 per 1,000 at 60 to 64 years is far below rates for the school ages, and the maximum of 145 per 1,000 at 6 years seems too low to include all school examinations.[4]

The age curve of complete examinations is very similar to that of all examinations, since the complete class constitutes a very large proportion of the total reported. Cases of infant supervision have been counted as complete examinations because there is presumably no particular organ or part of the body that is given special attention.

[3] As compared to rates for other ages in this study the examination rate for children under 1 year of age is an understatement because a series of examinations classed as infant supervision has been counted as only one case. Of these infant examination cases, 49 percent had 4 or more calls to the physician, the average number of visits per case (series) being 5.2 calls.

[4] Several things suggest that the reports from the families do not include all of the school examinations. Since there is no fee and often no consent asked of the parent, many children may not even mention the school examination to the family.

According to the report on medical inspection of the schools of New York State (16), more than three fourths of the public-school children are examined during a school year. Reports from the families in New York State indicate that less than half that many of the children of school age were examined.

The Detroit Health Department reports that 38 percent of the school children were examined during the school year 1929–30 (3), but the Detroit families reported only about one fourth of the children of school age as being examined.

On the other hand, there are no doubt many places in the United States where no school examinations are given at any time during the child's whole school career. Rogers (14) states that "recent investigations (referring to unpublished data) indicate that not more than half of the children in the public schools of the United States have ever had their eyes examined." It is probably safe to assume that the proportion who have had a physical examination is less than that for an eye test. If less than half of the children are examined in the course of a large part of their school life, an *annual* examination rate of 10 to 15 percent for school children in this study would seem to be reasonably complete. It seems probable that the recorded examination rates for the school ages are somewhat lower than the real situation in the places surveyed. But the places surveyed all had one or more visiting nurses and most of them had health departments, and they may examine a higher proportion of their school children than is true in the United States as a whole.

The examination of adults is largely in private practice, and it is probable that the reports are rather complete, because the study emphasized costs and the examination would nearly always involve a fee.

TABLE 2.—*Physical examinations per 1,000 persons of specific ages in canvassed white families in 18 States during 12 consecutive months, 1928–31*

Age in years	Examinations per 1,000 population per year					Number of examinations					Population (years of life)
	Total complete and check-up			All places of examination		Total complete and check-up			All places of examination		
	All places	In public clinics	In private practice	Complete	Check-up	All places	In public clinics	In private practice	Complete	Check-up	
All ages [1]	99.9	50.3	40.6	78.4	12.5	3,502	1,939	1,563	3,021	481	38,544
Under 1	692.9	281.8	411.1	686.9	6.1	686	279	407	680	6	990
1	127.7	81.7	46.0	120.5	7.1	161	103	58	152	9	1,261
2	93.9	69.9	23.9	85.2	8.6	98	73	25	89	9	1,044
3	105.4	74.6	30.8	96.1	9.3	113	80	33	103	10	1,072
4	116.1	87.3	28.8	102.1	11.2	133	100	33	117	16	1,146
5	139.9	111.8	28.1	131.4		164	131	33	154	10	1,172
6	145.1	116.6	28.5	126.1	17.2	168	135	33	146	22	1,158
7	138.3	109.3	29.0	123.0		162	128	34	144	18	1,171
8–9	125.1	107.9	17.2	113.4	11.7	277	239	38	251	26	2,214
10–11	132.3	105.1	27.3	117.7	14.6	262	208	54	233	29	1,980
12–13	113.5	83.7	29.8	100.9	12.6	198	146	52	176	22	1,744
14–15	97.4	65.4	32.0	81.0	16.3	149	100	49	124	25	1,530
16–17	79.5	40.9	38.6	64.8	14.7	103	53	50	84	19	1,296
18–19	49.6	18.7	30.9	39.3	10.3	53	20	33	42	11	1,068
20–24	28.8	8.0	20.8	20.3	8.5	61	17	44	43	18	2,119
25–29	30.9	5.2	25.7	20.5	10.4	77	13	64	51	26	2,491
30–34	37.5	9.2	28.3	22.9	14.6	118	29	89	72	46	3,149
35–39	38.3	8.2	30.1	28.6	9.7	126	27	99	94	32	3,292
40–44	40.6	11.4	29.2	25.0	15.5	107	30	77	66	41	2,638
45–49	43.6	7.8	35.8	36.3	7.3	84	15	69	70	14	1,928
50–54	45.7	3.5	42.2	31.6	14.1	65	5	60	45	20	1,423
55–59	54.9	2.4	52.5	26.3	28.6	46	2	44	22	24	838
60–64	59.8	6.3	53.5	40.9	18.9	38	4	34	26	12	635
65–69	50.8	2.2	48.6	28.7	22.1	23	1	22	13	10	453
70 and over	36.7	1.8	34.9	31.2	5.5	20	1	19	17	3	545

[1] "All ages" includes a few of unknown age. Ages of persons and cases under 12 months old are computed in months. The "years of life" under 1 year old includes only the observation time of the infant up to 12 months of age, his observation time and cases after that date being counted with the 1-year-olds. This accounts for the smaller number of years of life under 1 year and the larger number of years of life at 1 year of age.

There are few check-up examinations under 1 year of age. As age increases, the number of check-ups increases, with relatively high rates from 6 to 17 years. These high rates at the school ages may represent check-ups by private physicians of conditions that were called to the attention of the parent by the school examination. After a decrease at 20 to 24 years, the rate fluctuates around approximately the same level until about 55 years, and there is a very definite increase for the ages 55 to 70 years. After 70 fewer check-ups are made.

FREQUENCY OF EXAMINATIONS AMONG MALES AND FEMALES

Table 3 and figure 3 show examination rates by sex and age. When the data are arranged by 5-year groups, children under 5 show a higher examination rate than any other age group, due in large part to examinations or health supervision of infants under 1 year. For all age groups under 55 years, examinations are reported more frequently among females than among males, but the reverse is true above that age. The relative differences between the sexes are greater for check-up examinations; no material difference occurs under 5 years in complete examinations. The higher rate for males above 55 years is true for both complete and check-up examinations.

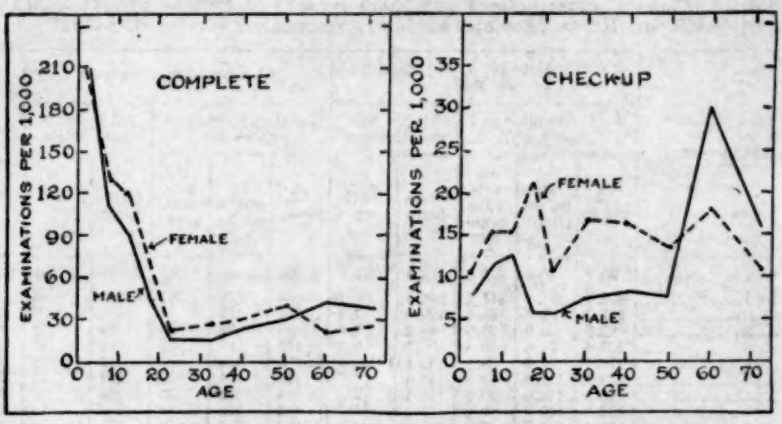

FIGURE 3.—Physical examinations per 1,000 males and females of specific ages—canvassed white families in 18 States during 12 consecutive months, 1928–31.

TABLE 3.—*Physical examinations per 1,000 males and females of different ages in canvassed white families in 18 States during 12 consecutive months, 1928–31*

Sex and kind of examination	Age										
	All ages [1]	Under 5	5–9	10–14	15–19	20–24	25–34	35–44	45–54	55–64	65 and over
	Examinations per 1,000 population per year										
Total complete and check-up:											
Both sexes	90.9	216.0	134.9	118.4	73.4	28.8	34.6	39.3	44.5	57.0	43.1
Male	84.0	215.8	122.7	102.6	50.4	22.4	22.9	31.9	37.4	72.1	52.6
Female	97.5	217.6	146.8	134.5	96.5	33.5	43.2	46.8	53.1	38.9	35.7
Complete examinations:											
Both sexes	78.4	[2] 207.0	121.6	104.4	59.7	20.3	21.8	27.0	34.3	32.6	30.1
Male	74.2	208.0	111.3	90.0	44.5	16.8	15.4	23.5	29.8	42.3	36.6
Female	82.4	207.2	131.6	119.1	74.9	22.9	26.6	30.5	39.8	20.9	25.0
Check-up examinations:											
Both sexes	12.5	9.1	13.3	14.0	13.8	8.5	12.8	12.3	10.1	24.4	13.0
Male	9.8	7.8	11.3	12.6	5.9	5.6	7.5	8.4	7.6	29.9	16.0
Female	15.1	10.4	15.2	15.4	21.7	10.6	16.7	16.3	13.3	17.9	10.7
	Number of examinations										
Total complete and check-up:											
Both sexes [2]	3,502	1,191	771	541	224	61	195	233	149	84	43
Male	1,588	606	346	236	77	20	55	95	69	58	23
Female	1,913	584	425	305	147	41	140	138	80	26	20
Complete examinations:											
Both sexes [2]	3,021	1,141	695	477	182	43	123	160	115	48	30
Male	1,403	584	314	207	68	15	37	70	55	34	16
Female	1,617	556	381	270	114	28	86	90	60	14	14
Check-up examinations:											
Both sexes [2]	481	50	76	64	42	18	72	73	34	36	13
Male	185	22	32	29	9	5	18	25	14	24	7
Female	296	28	44	35	33	13	54	48	20	12	6
	Population (years of life)										
Both sexes [2]	38,544	5,513	5,715	4,568	3,050	2,119	5,640	5,930	3,351	1,473	998
Male	18,896	2,808	2,829	2,301	1,527	894	2,402	2,979	1,845	804	437
Female	19,627	2,684	2,895	2,267	1,523	1,225	3,238	2,951	1,506	669	561

[1] "All ages" incudes a few of unknown age.
[2] "Both sexes" includes a few of unknown sex.

Table 1 indicates that for each of the 4 classes of complete examinations, except infant supervision, and for 10 of the 12 classes of check-up examinations shown in that table, the rates are slightly higher for females than for males. In the 2 classes in which the rates are higher for males, the numbers are small.

FREQUENCY OF EXAMINATIONS AMONG MARRIED AND SINGLE PERSONS

In table 4 examination rates are shown for married and single persons 20 to 34 years of age. Below these ages there are so few married and above so few single persons that comparison does not seem worth while. Examination rates do not vary greatly from 20 to 34 years, and so the data are shown only for the total of those ages. Fewer complete but more check-up examinations were reported among married than among single persons. This statement is true for both males and females, but the differences are greater for the latter.

TABLE 4.—*Physical examinations per 1,000 single and married persons 20 to 34 years of age—canvassed white families in 18 States during 12 consecutive months, 1928–31*

Marital status	All examinations			Complete examinations			Check-up examinations			Population (years of life)		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
	Examinations per 1,000 persons 20 to 34 years of age											
Single	34.8	21.7	48.3	27.6	16.3	39.3	7.2	5.4	9.0	------	------	------
Married	32.5	23.3	38.8	19.4	15.7	22.0	13.1	7.6	16.8	------	------	------
	Number of examinations											
Single	63	20	43	50	15	35	13	5	8	1,812	922	890
Married	191	55	136	114	37	77	77	18	59	5,869	2,364	3,505

FAMILY INCOME AND FREQUENCY OF EXAMINATIONS

As might have been anticipated, physical examinations are considerably more frequent among the higher income groups than in the lower income classes. Table 5 shows examination rates per 1,000 persons in each of five income groups. With the exception of the lowest class, there is a constantly rising examination rate as income increases. If infant supervision is excluded, the increase with income is more marked.[5] In the families with incomes of $5,000 or over, the total examination rate (exclusive of infant supervision) is more than 2½ times that in the lower income groups, while the examination rate in families with incomes of $10,000 or over is more than 4 times that in the groups with incomes under $2,000.

[5] The higher examination rates in the low income classes for infant supervision appear to be largely the result of more infants, since the examinations are related to the total population and not to the infant population when rates for all ages are computed.

TABLE 5.—*Physical examinations per 1,000 persons in canvassed white families of different income levels in 18 States during 12 consecutive months, 1928–31 (all types of examinations)*

Annual family income	All ages [1]		Under 5		5–14		15–24	25–44	45–64	65 and over
	Including infant and child supervision	Excluding infant and child supervision	Including infant and child supervision	Excluding infant and child supervision	Including infant and child supervision	Excluding infant and child supervision				
	Examinations per 1,000 population per year									
Under $1,200	93.8	52.2	267.2	42.6	125.1	109.9	38.7	24.9	9.2	8.1
$1,200 but under $2,000	76.8	51.3	176.9	35.2	127.4	120.3	32.1	18.2	18.3	7.1
$2,000 but under $3,000	75.9	56.7	187.6	57.7	106.5	104.9	50.5	28.4	33.3	42.3
$3,000 but under $5,000	86.3	70.7	221.8	82.7	122.5	119.9	56.6	50.3	42.0	64.3
$5,000 and over	154.6	136.7	391.6	177.5	177.9	175.9	117.0	109.5	135.1	135.8
	Number of examinations									
Under $1,200	546	304	257	41	215	189	30	36	6	2
$1,200 but under $2,000	1,031	689	392	78	483	456	55	74	24	2
$2,000 but under $3,000	720	538	257	79	269	265	61	87	37	8
$3,000 but under $5,000	424	347	118	44	142	139	42	80	30	9
$5,000 and over	725	641	150	68	179	177	89	147	134	22
	Population under observation [2]									
Under $1,200	5,820		962		1,719		775	1,447	649	247
$1,200 but under $2,000	13,419		2,216		3,790		1,715	4,060	1,313	283
$2,000 but under $3,000	9,491		1,370		2,527		1,207	3,058	1,110	189
$3,000 but under $5,000	4,911		532		1,159		742	1,592	715	140
$5,000 and over	4,089		383		1,006		761	1,343	992	162

[1] "All ages" includes a few of unknown age.

[2] Nearly all persons were under observation the whole 12 months. For births during the study an adjustment was made to reduce their observation period to full-time years of life.

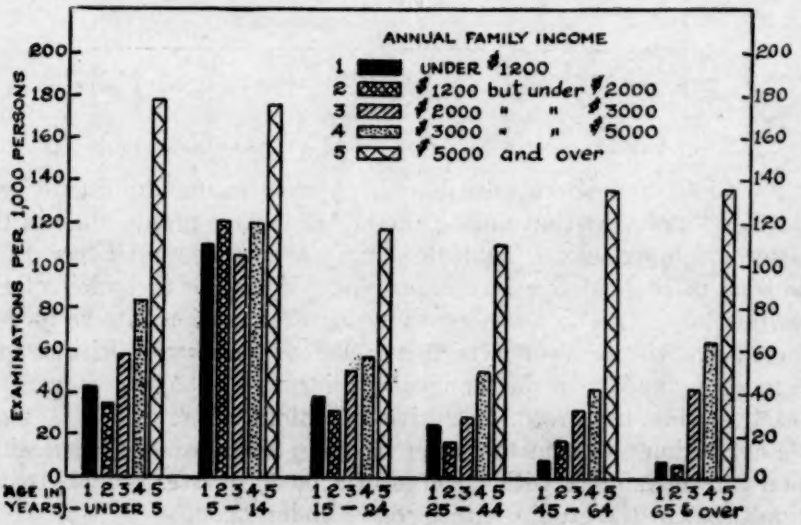

FIGURE 4.—Physical examinations per 1,000 persons of specific ages in different income levels—canvassed white families in 18 States during 12 consecutive months, 1928–31. (Infant and child supervision are not included as examinations in this chart.)

Considering examinations at specific ages in the different groups (fig. 4) it will be noted that the rates for the upper income classes are consistently higher in the various age groups. At the school ages in which most of the examinations are made in school, the rates are practically the same except in families with an income of $5,000 or above. Even in these higher income families, rates for children 5 to 14 years old are only about 50 percent in excess of those for the same ages in families with less than $1,200 income; but in both the age groups 45–64 and 65 years and over, examination rates for persons in families with $5,000 or more income are about 15 times those in the class under $1,200. In the older ages where most of the examinations are the work of private practitioners, income is a very important factor in their frequency.

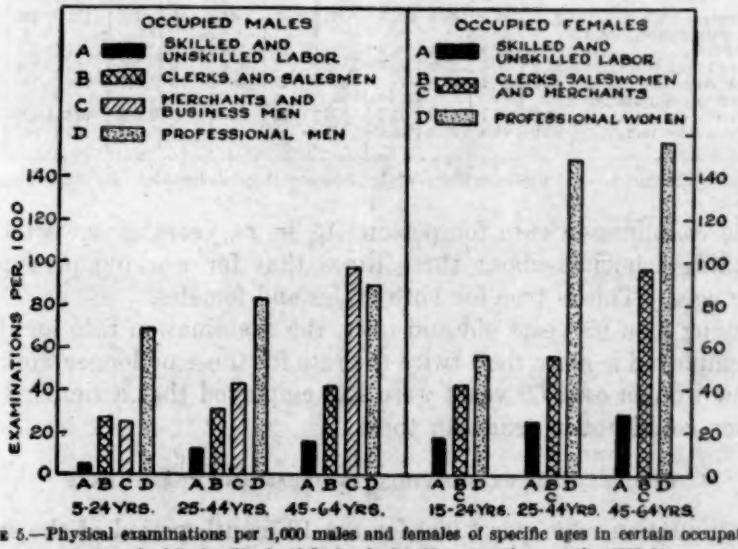

FIGURE 5.—Physical examinations per 1,000 males and females of specific ages in certain occupations—canvassed white families in 18 States during 12 consecutive months, 1928–31.

OCCUPATION AND THE FREQUENCY OF EXAMINATIONS

The occupation of each individual was recorded on the schedule. As income is related to occupation, one would expect the frequency of examinations to vary with occupation. However, it is of interest to see what kinds of occupations have more frequent examinations. With the small numbers of examinations it is possible to use only broad groups rather than specific occupations. Table 6 and figure 5 show examination rates among employed males and females of different occupations. The highest rates occur among professional men and women and the lowest among those in laboring groups.

The table includes data for farmers and for housewives on the farm and in towns and cities. The frequency of examinations is approximately the same for farmers and farmers' wives, but the rates for town and city housewives are about twice those for farm housewives.

TABLE 6.—*Physical examinations per 1,000 persons in certain occupations—canvassed white families in 18 States during 12 consecutive months, 1928–31*

Occupation	Examinations per 1,000 population per year				Number of examinations				Population			
	Total 15–64	15–24	25–44	45–64	Total 15–64	15–24	25–44	45–64	Total 15–64	15–24	25–44	45–64
	Males											
Professional men	84.6	69.0	82.9	89.4	56	2	33	21	662	29	398	235
Merchants and business men	64.6	25.6	43.6	97.9	85	1	33	51	1,316	39	756	521
Clerks and salesmen	32.8	26.7	31.4	41.8	48	7	28	13	1,464	262	891	311
Skilled and unskilled labor	12.0	5.0	12.4	15.4	48	3	30	15	3,984	597	2,412	975
Farmers and farm laborers	19.8	29.0	23.2	11.6	19	4	11	4	958	138	475	345
	Females											
Professional women	125.5	56.0	148.8	156.3	60	7	43	10	478	125	289	64
Clerks, saleswomen, and merchants	51.7	42.1	55.4	98.8	39	17	16	6	755	404	280	62
Skilled and unskilled labor	22.7	17.9	25.3	28.6	9	3	4	2	396	168	158	70
All housewives [1]	38.6	27.1	38.0	44.7	305	19	203	83	7,897	701	5,340	1,856
Town or city housewives	42.5	27.7	41.2	52.2	278	16	185	77	6,548	578	4,495	1,475
Farm housewives	20.0	24.4	21.3	15.7	27	3	18	6	1,349	123	845	381

[1] "Housewife" here means a person in charge of the home and therefore includes a few single women.

The examination rate for persons 15 to 24 years of age who are attending school is about three times that for working persons of those ages. This is true for both males and females.

Among men 65 years old and over, the examination rate for those still employed is more than twice the rate for those no longer working. So few women over 65 years were still employed that a similar comparison could not be made for them.

FREQUENCY OF EXAMINATIONS IN URBAN AND RURAL AREAS

Examination rates per 1,000 for the 12-month period of the study are shown for four sizes or kinds of communities in table 7. With the rather inconsistent and inconclusive results, it can only be suggested that size of city is not a major factor in the frequency of physical examinations. Nor do rates in the four types of communities for persons of specific income classes show any consistent variation in the frequency of examination as related to size of city or town.

TABLE 7.—*Physical examinations per 1,000 persons in urban and rural communities—canvassed white families in 18 States during 12 consecutive months, 1928–31 (all types of examinations)*

Population of city or town	All ages [1]		Under 5		5–19		20–44	45 and over
	Including infant and child supervision	Excluding infant and child supervision	Including infant and child supervision	Excluding infant and child supervision	Including infant and child supervision	Excluding infant and child supervision		
	Examinations per 1,000 population per year							
Cities of 100,000 or over	90.7	65.8	235.4	56.0	109.6	108.3	41.2	46.9
Cities of 5,000 but under 100,000	93.5	59.7	232.6	42.3	84.0	73.6	37.7	103.2
Towns under 5,000	113.6	89.3	223.1	78.4	187.1	179.2	31.3	21.7
Rural areas	62.5	52.6	135.1	60.2	92.3	91.6	23.7	13.1
	Number of examinations							
Cities of 100,000 or over	1,302	944	462	110	505	499	228	101
Cities of 5,000 but under 100,000	906	579	357	65	284	249	130	134
Towns under 5,000	862	677	253	89	501	480	81	25
Rural areas	432	364	119	53	246	244	50	16
	Population (years of life)							
Cities of 100,000 or over	14,351		1,963		4,609		5,540	2,155
Cities of 5,000 but under 100,000	9,694		1,535		3,381		3,449	1,298
Towns under 5,000	7,585		1,134		2,678		2,580	1,151
Rural areas	6,914		881		2,665		2,111	1,218

[1] "All ages" includes a few of unknown age.

SICKNESS AND THE FREQUENCY OF EXAMINATIONS

The sickness and examination records on the same individuals for the 12-month period make it possible to determine whether those persons who were not sick during the year or those who were sick several times were more inclined to go to physicians and clinics for physical examination. It must be remembered that the examinations under consideration exclude all procedures to diagnose a case of illness and are presumably of well persons for preventive purposes only. Figure 6 shows the proportion of individuals who had an examination among persons not sick, sick once, sick twice, and sick three or more times during the year under observation. It is immediately apparent that those individuals who are most frequently sick are the ones who are most likely to go to the doctor for a health examination. Twice as many of those who were sick three or more times during the 12-month period had an examination as of those who reported no illness.

TABLE 8.—*Physical examinations* [1] *among persons classified according to the number of times sick during the year under observation—canvassed white families in 18 States during 12 consecutive months, 1928–31*

	Percentage of persons who had a physical examination [1] of any kind during the year						Total number of persons under observation [2]					
	All ages over 1 year	1–4	5–14	15–19	20–44	45 and over	All ages over 1 year	1–4	5–14	15–19	20–44	45 and over
All incomes:												
Both sexes:												
Not sick	4.6	3.6	9.1	5.7	2.2	2.7	17,527	1,364	4,804	1,785	6,798	2,776
Sick once	6.2	5.8	11.7	4.7	3.4	3.8	11,836	1,453	3,318	882	4,280	1,903
Sick twice	7.8	4.8	13.1	8.5	4.7	7.5	4,927	786	1,404	272	1,677	788
Sick 3 or more times	10.8	10.3	16.5	12.6	7.7	7.2	2,477	524	674	111	836	332
Male:												
Not sick	4.0	3.7	8.1	3.8	1.9	2.7	9,266	702	2,357	911	3,640	1,656
Sick once	5.7	6.3	10.0	3.7	2.9	3.8	5,597	750	1,693	437	1,779	938
Sick twice	6.9	4.1	11.3	2.6	3.9	7.7	2,116	393	683	117	561	362
Sick 3 or more times	11.7	11.7	15.6	13.7	6.7	8.7	1,024	281	352	51	225	115
Female:												
Not sick	5.4	3.5	10.1	7.6	2.6	2.7	8,261	662	2,447	874	3,158	1,120
Sick once	6.6	5.3	13.4	5.6	3.8	3.8	6,239	703	1,625	445	2,501	965
Sick twice	8.4	5.6	14.8	12.9	5.0	7.3	2,811	393	721	155	1,116	426
Sick 3 or more times	10.1	8.6	17.4	11.7	8.0	6.5	1,453	243	322	60	611	217
Both sexes:												
Family income under $3,000:												
Not sick	3.8	3.0	8.4	4.0	1.5	1.0	13,406	1,186	3,948	1,291	5,103	1,878
Sick once	5.5	5.0	11.6	3.6	2.1	2.3	8,853	1,229	2,623	638	3,139	1,224
Sick twice	6.3	4.1	13.0	8.1	2.9	2.7	3,521	615	1,035	186	1,205	480
Sick 3 or more times	8.6	6.2	16.6	13.3	5.0	4.8	1,646	370	429	60	579	208
Family income $3,000 and over:												
Not sick	7.2	7.3	12.3	9.9	4.5	6.1	4,121	178	856	494	1,695	898
Sick once	8.3	9.8	11.9	7.4	7.0	6.6	2,983	224	695	244	1,141	679
Sick twice	11.3	7.6	13.3	9.3	9.1	14.9	1,406	171	369	86	472	308
Sick 3 or more times	15.2	20.1	16.3	11.8	13.6	11.3	831	154	245	51	257	124

[1] Infant and child supervision and the supervision of arrested tuberculosis cases are not included as examinations in this table.

[2] All except about 1.5 percent were under observation the whole 12 months.

As already noted, examinations are closely related to family income. In the lower sections of figure 6, examination rates are shown separately for persons in families with annual incomes under $3,000 and for those with incomes of $3,000 or more. In both groups those persons who were sick three or more times had more frequent examinations than those who were not sick, with rates for persons sick once and twice falling between the two extremes.

Both examination and sickness rates vary considerably with age, and it is necessary to consider the relationship at specific ages. Figure 7 shows the proportion of individuals of specific ages who had an examination among persons not sick, sick once, sick twice, and sick three or more times during the year. In each age group there is a definite tendency for examination rates to increase as the number of times sick increases. Even at the school ages of 5 to 14 years the sickly children had more examinations than the well group. This may have resulted from more service by private physicians to whom delicate and

sickly children were taken for examination, or it may be a manifestation of the "screening" process in school health work by which only

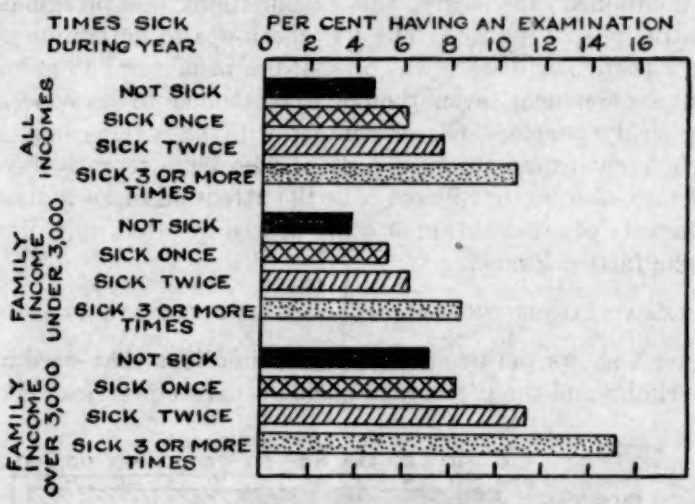

FIGURE 6.—Physical examinations among persons classified according to the number of times sick during the year of observation—canvassed white families of two income groups in 18 States during 12 consecutive months, 1928-31. (Infant and child supervision and the supervision of arrested tuberculosis cases are not included as examinations in this chart.)

those children are examined by the school physician who are adjudged under par on the teacher's inspection, or who are underweight, or who

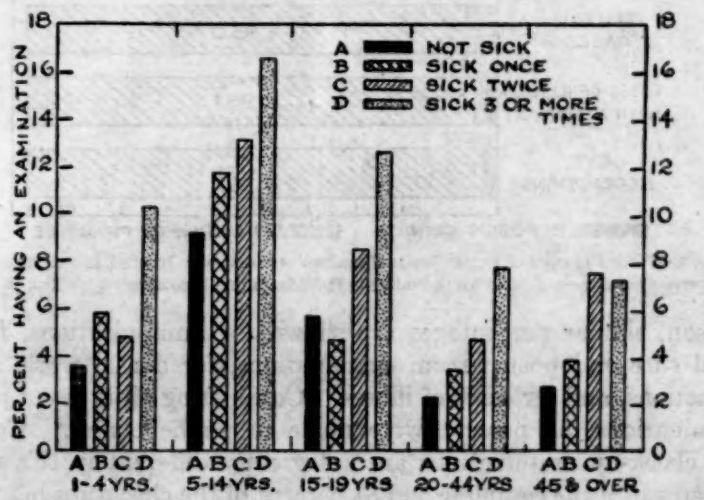

FIGURE 7.—Physical examinations among persons of specific ages classified according to the number of times sick during the year of observation—canvassed white families in 18 States during 12 consecutive months, 1928-31. (Infant and child supervision and the supervision of arrested tuberculosis cases are not included as examinations in this chart.)

have been absent from school on account of sickness, or who are selected for examination by some similar process.

Reference to table 8 indicates that the relationships discussed above are true for each sex and generally for each age group of each sex.

As mentioned previously, the examinations are presumably for preventive purposes only. The few check-ups to determine whether or not a particular disease was present are insufficient to account for the large differences, even though they tended to be concentrated among sickly people.[6] Closer contact with physicians may lead to more frequent examination of persons who have recently been sick, and it may also be that illness calls the attention of an individual to the necessity of examination or other procedures that may prevent or postpone further illness.

EXAMINATIONS IN PUBLIC CLINICS AND PRIVATE PRACTICE

Figure 8 shows the percentage of examinations that were made in public clinics and the percentage made in private practice. For com-

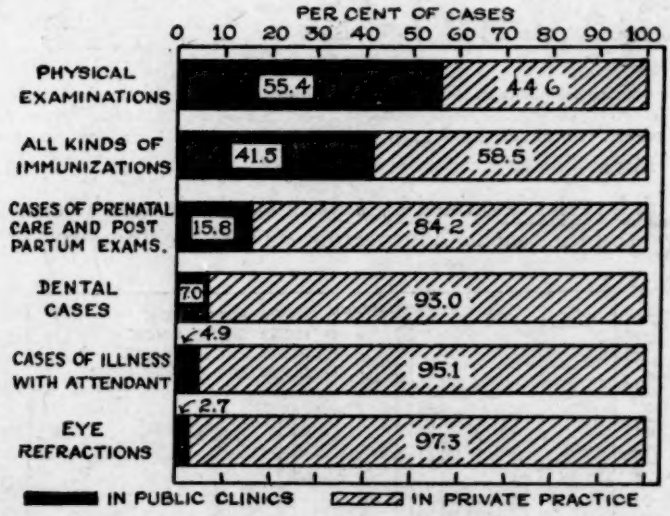

FIGURE 8.—Percent of cases of various kinds of medical care that were handled in public clinics and in private practice—canvassed white families in 18 States during 12 consecutive months, 1928–31.

parison, similar percentages are shown for immunizations, for prenatal care and post-partum examinations, for dental work, for eye refractions, and for cases of illness. Considering all types of physical examinations, 55 percent were made in public clinics.[7] Complete and check-up examinations are not greatly different in this respect, 56 percent of the complete and 51 percent of the check-ups being made in public clinics. In the case of immunizations a somewhat smaller

[6] Those families whose illness records were most complete would also be most likely to render complete reports of examinations. However, it does not appear probable that this factor is important enough to account for the large and consistent differences in the various age and sex groups.

[7] In the family income group under $1,200 and the $1,200–$2,000 group 72 and 76 percent, respectively, of the physical examinations were made in public clinics. As income increases, fewer examinations are made in public clinics, and in the $10,000-and-over class 5 percent of the examinations were made in public clinics.

proportion is done in public clinics, 42 percent. A very large percentage of these two types of distinctly preventive services is rendered by public clinics. Prenatal care and post-partum examinations may be classed as preventive services, but they are to prevent complications and sequelae rather than the occurrence of the case itself. In another sense they are merely a part of the therapeutic care of a maternity case. These services are rendered rather largely by private practitioners, only 16 percent of the prenatal care and post-partum examinations being done by public clinics, with 84 percent in the hands of private practitioners. Other types of cases are almost entirely in the hands of private practitioners, only 7 percent of the dental cases, 5 percent of the cases of illness that had an attendant,[8] and 3 percent of the eye refractions being cared for by public clinics.

The regular school examinations and infant supervision cases constitute a large part of the clinic examinations. Of the school examinations, 93 percent were made by public clinics or school physicians, and 56 percent of the infant supervision was under the public clinic or the visiting nurse. Of the nonschool examinations of preschool and school children, 33 percent were done by public clinics, and of the other examinations of older children and adults only 10 percent were done by public clinics.

TABLE 9.—*Proportion of physical examinations that were made by public clinics or other public facilities—canvassed white families in 18 States during 12 consecutive months, 1928–31*

	All examinations	Complete examinations					Check-up examinations				
		All complete	School examinations of school and preschool children	Other examinations of school and preschool children	Infant and child supervision	Other examinations of older children and adults	All check-ups	Tuberculosis contacts	Chest and respiratory system except nose and throat	Arrested tuberculosis	All other check-ups
Percentage of examinations made in public clinics [1]	55.4	56.1	92.5	33.3	55.8	9.9	50.7	89.8	70.9	55.6	25.0
Number of examinations made in public clinics [1]	1,939	1,695	945	174	523	53	244	106	56	20	62
Total number of examinations	3,502	3,021	1,022	523	938	538	481	118	79	36	248

[1] The difference between these percentages and 100 represents the percentage of examinations done in private practice. Examinations made by school physicians and infant supervision by visiting nurses are included with those done by public clinics.

Considering the different types of check-up examinations, 90 percent of those of tuberculosis contacts, 71 percent of the check-ups of

[8] Of the total cases of illness, 3.9 percent had 1 or more calls to a public clinic, but of the cases that had any medical attendant, 4.9 percent had 1 or more calls to a public clinic.

the chest and respiratory system, and 56 percent of the check-ups on arrested tuberculosis cases are done in public clinics, as against 25 percent of all other kinds of check-up examinations.[9]

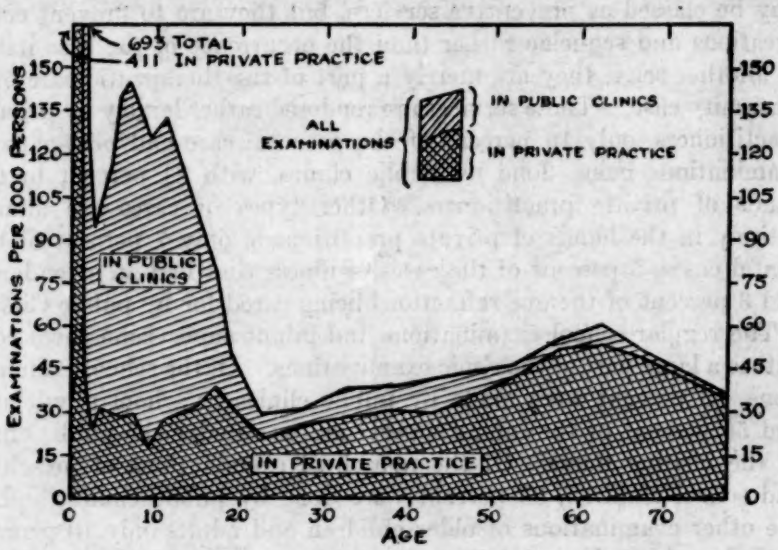

FIGURE 9.—Physical examinations in public clinics and in private practice per 1,000 persons of specific ages—canvassed white families in 18 States during 12 consecutive months, 1928–31.

Figure 9 shows examination rates per 1,000 persons of different ages for all examinations and for those made in private practice (table 2). The difference between the two curves represents the examination service rendered by public clinics. With the exception of frequent examinations of infants and a gradual rise to a peak at 60 to 64 years of age, the rates for private practice do not vary greatly

[9] The following table shows for the various types of examinations the percentage of the public clinic examinations that were reported as entirely free. Of all examinations made in public clinics, 93 percent were reported as made with no charge whatever; the other 7 percent includes those with a nominal fee as well as the few that were on a real pay basis.

Proportion of public clinic examinations that were made without charge—canvassed white families in 18 States during 12 consecutive months, 1928–31

	All examinations	Complete examinations					All check-up examinations
		All complete	School examinations of school and preschool children	Other examinations of school and preschool children	Infant and child supervision	Other examinations of older children and adults	
Percentage of public clinic examinations that were free	93.5	93.4	99.8	84.5	88.6	50.9	94.0
Number of public clinic examinations that were free	1,714	1,527	943	147	410	27	187
Total number of public clinic examinations with known pay status	1,834	1,635	945	174	463	53	199

with age. The discontinuance of examinations by the schools and other public clinics would reduce the rate under 20 years of age to a fraction of that shown in the figure, but would not change materially the frequency of examination above 45 years and not greatly the rates for the ages from 20 to 45.

TABLE 10.—*Proportion of physical examinations at different ages that were made by public clinics or other public facilities—canvassed white families in 18 States during 12 consecutive months, 1928–31*

Age in years	Percentage of examinations made in public clinic [1]			Number of examinations made in public clinic [2]		
	Complete and check-up	Complete	Check-up	Complete and check-up	Complete	Check-up
All ages	55.4	56.1	50.7	1,939	1,695	244
Under 1	40.7	40.4	66.7	279	275	4
1	64.0	63.2	77.8	103	96	7
2–3	72.5	72.4	73.7	153	139	14
4–5	77.8	80.4	50.0	231	218	13
6–7	79.7	80.7	72.5	263	234	29
8–9	86.3	85.7	92.3	239	215	24
10–11	79.4	79.8	75.9	208	186	22
12–13	73.7	72.2	86.4	146	127	19
14–15	67.1	69.4	56.0	100	86	14
16–17	51.5	53.6	42.1	53	45	8
18–19	37.7	40.5	27.3	20	17	3
20–24	27.9	23.3	38.9	17	10	7
25–34	21.5	8.1	44.4	42	10	32
35–44	24.5	13.8	47.9	57	22	35
45–54	13.4	12.2	17.6	20	14	6
55–64	7.1	2.1	13.9	6	1	5
65 and over	4.7	----------	15.4	2	----------	2
Under 20	65.8	65.7	67.7	1,795	1,638	157
20–44	23.7	12.9	45.4	116	42	74
45 and over	10.1	7.8	15.7	28	15	13

[1] The difference between these percentages and 100 represents the percentages of examinations done in private practice. Examinations made by school physicians and infant supervision by visiting nurses are included with those done by public clinics.
[2] See table 2 for total numbers of examinations in all places.

In figure 10 the public-private character of the examination service has been plotted on a percentage basis (table 10). Starting with a figure of 41 percent of the examinations under 1 year of age being made by public clinics, the proportion increases rapidly to a maximum of 87 percent for the 8–9 year age group, after which it declines rapidly to 20 years and then gradually to the end of life. At no age above 25 years does the public clinic make as many as one fourth of the examinations, and for the ages above 65 years less than 5 percent of the examinations are made in public clinics.

For the ages under 20 years, about the same proportion of complete and check-up examinations are made in public clinics, but for adults the proportion of check-ups made in public clinics is greater than in the case of complete examinations. In the ages 20 to 44 years, 45 percent of the check-ups are made by public clinics, as against 13 percent of the complete examinations. For the ages above 45 years 16 percent of the check-ups and 8 percent of the complete examinations are made in public clinics.

TABLE 11.—*Proportion of laboratory and X-ray work in connection with physical examinations that was done in public or public-clinic laboratories—canvassed white families in 18 States during 12 consecutive months, 1928–31*

	All examinations	Complete examinations	Check-up examinations
Percentage of laboratory or X-ray cases in which work was done in public or public-clinic laboratories	39.5	25.8	51.1
Number of laboratory or X-ray cases in which work was done in public or public-clinic laboratories	103	31	72
Total number of cases having laboratory or X-ray service with known place of performance	261	120	141

A small proportion of the examinations included laboratory and X-ray work. Of the cases with either of these services, 40 percent had this work done in public or public-clinic laboratories (table 11).

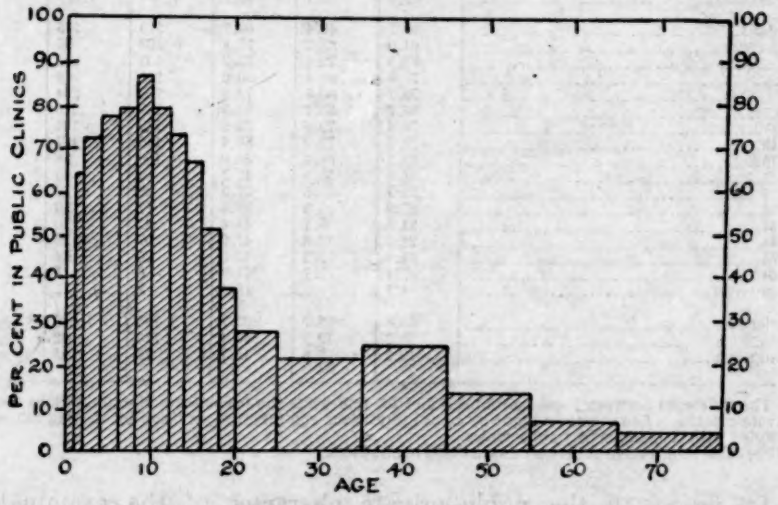

FIGURE 10.—Proportion of physical examinations at specific ages that were made in public clinics—canvassed white families in 18 States during 12 consecutive months, 1928–31.

CHARACTER OF THE EXAMINATIONS

Little or no data were included on the nature or thoroughness of the examinations. It is possible, however, to compute the number of calls per examination and the proportion of cases having certain services. These items have been tabulated in table 12. Considering all types of examinations, there was an average of 1.9 calls or visits to the doctor in connection with an examination. The number of calls for all complete examinations except infant supervision was in nearly all instances one per case. A case of infant supervision represents a series of visits to the doctor which amounted to an average of 5.2 calls per case. Of these cases of infant supervision, 76 percent had more than 1 call, and 49 percent had 4 or more calls. For the other three classes of complete examinations, 98 percent or more of the cases had only one call. The average number of calls per check-up

TABLE 12.—*Amount and kind of service received in connection with different types of physical examinations—canvassed white families in 18 States during 12 consecutive months, 1928–31*

	All examinations	Complete examinations					Check-up examinations				
		All complete	School examinations of school and preschool children	Other examinations of school and preschool children	Infant and child supervision	Other examinations of older children and adults	All check-ups	Tuberculosis contacts	Chest and respiratory system except nose and throat	Arrested tuberculosis	All other check-ups
Visits to examining physician:											
Mean calls per case	1.94	2.01	1.00	1.03	5.19	1.07	1.49	1.70	1.39	2.96	1.24
Percentage of cases with only 1 call	81.1	81.3	99.8	98.5	24.2	97.5	80.0	73.5	78.5	44.0	88.3
Percentage of cases with 3 or more calls	14.7	15.0	0.2	0.6	61.3	1.7	12.9	17.1	12.7	44.0	7.0
Total number of cases with known number of calls	3,128	2,694	1,014	520	[1] 636	524	434	117	79	25	[2] 213
Percentage of examinations reported as made by specialists	8.3	7.1	0.5	11.1	12.4	6.7	15.4	5.9	6.3	2.8	24.6
Number of examinations by specialist	289	215	5	58	116	36	74	7	5	1	61
Visiting nurse:											
Mean visits per case	0.88	0.95	0.02	0.15	2.96	0.01	0.43	0.89	0.58	1.32	0.05
Mean visits per case having a visiting nurse	4.7	5.1	1.5	2.5	5.3	1.3	2.4	2.7	1.8	4.0	1.3
Percentage of cases having a visiting nurse	18.9	18.9	1.3	6.3	55.7	0.7	18.5	35.6	32.9	33.3	3.6
Number of cases having a visiting nurse	661	572	13	33	522	4	89	42	26	12	9
Total number of cases	3,502	3,021	1,022	523	938	538	481	118	79	36	248
Special X-ray or laboratory service:											
Percentage of cases with—											
X-ray service	2.7	1.2	0.5	0.6	----------	4.5	11.0	11.0	21.5	16.7	6.9
1 or more laboratory procedures	6.9	4.4	0.7	4.2	1.0	15.6	21.0	5.9	15.2	11.1	31.5
Urinalysis	4.5	3.3	0.3	2.9	0.2	13.0	11.4	----------	2.5	----------	21.4
All other laboratory procedures	3.3	2.1	0.6	1.9	1.0	6.5	10.2	5.9	13.9	11.1	10.9
Number of cases with—											
X-ray service	85	32	5	3	----------	24	53	13	17	6	17
1 or more laboratory procedures	220	119	7	22	6	84	101	7	12	4	78
Urinalysis	144	89	3	15	1	70	55	----------	2	----------	53
All other laboratory procedures	106	57	6	10	6	35	49	7	11	4	27
Total cases known as to special service	3,183	2,702	1,022	523	619	538	481	118	79	36	248

[1] Data on number of calls to examiner excludes 165 cases of infant supervision in which the only attendant was a visiting nurse.
[2] Data on number of calls to examiner excludes 28 cases of urinalysis by a laboratory with no actual calls to physician or other practitioner.

examination was 1.5. Tuberculosis contacts had 1.7 calls per examination, chest and respiratory examinations had 1.4 calls, but the supervision of arrested tuberculosis averaged 3.0 calls per case, 36 percent of the cases having 4 or more calls. For the other check-ups the average number of calls per case was 1.2, and 88 percent of the cases had only one call.

Of the complete examinations 7 percent were reported as being made by specialists, and of the check-ups 15 percent were so reported. These figures are a minimum statement, inasmuch as private specialists may have been consulted but reported merely as the family or other physician, and a specialist's work in a clinic may have been reported merely as service by the clinic, with no information about the kind of clinic doctor.

Of the complete examinations, 19 percent reported a visiting nurse on the case; but most of the nursing work was on infant supervision, in which 56 percent of the cases had one or more nurse's visits. In other types of complete examinations, nurses' visits are negligible, except nonschool examinations of school and preschool children, of which 6 percent had one or more visits. This suggests the probability that some of these children were taken to private practitioners at the suggestion of the school authorities, since a school nurse, urging the correction of a defect before the child was taken to a physician, would be counted as a nurse on such a case. Of all check-up examinations, 19 percent had a visiting nurse. Of the tuberculosis contacts, chest examinations, and arrested tuberculosis supervision, about one third of each class had a visiting nurse, but only 4 percent of all other check-ups had a nurse.

Only 1 percent of the complete examinations had X-ray service, and most of this was on examinations of adults and older children that were largely done in private practice. Of the check-ups, 11 percent had some X-ray service, mostly on tuberculosis contacts, chest examinations, and arrested tuberculosis supervision.

Of the complete examinations, 4 percent had some laboratory service, 3 percent had urinalysis, and 2 percent had some other laboratory service either alone or in addition to urinalysis. Most of these services also were on examinations of adults and older children, 16 percent of these cases having some laboratory service, 13 percent having urinalysis, and 7 percent having some other laboratory service. Of the check-up examinations, 21 percent had some laboratory service, 11 percent had urinalysis, and 10 percent had laboratory service other than urinalysis.

A report was obtained on complete examinations (exclusive of infant and child supervision) as to whether defects were found (table 13). In 2,000 cases in which this item was recorded, 44 percent were reported as having defects. In the school examinations 55 percent were so reported, and in each of the other two classes 34 percent

indicated that defects were found.[10] A further report was obtained as to whether any attempt was made to correct the defects that had been discovered on the examinations. Of those persons reported as having defects, 54 percent stated that the defects were being corrected. On the school examinations, where the highest percentage was indicated as having defects, 38 percent stated that the defects were being corrected, but on the other two classes of examinations, largely by private practitioners, 76 and 79 percent stated that the defects were being corrected. The higher defect rate and the lower correction rate in the school examinations suggest the possibility of more trivial conditions being reported as defects in school examinations than on the two other classes of examinations. On the other hand, those persons who went to private practitioners for examination would be the ones most likely to carry out the advice about corrections.

TABLE 13.—*Defects found and advice given and followed in complete physical examinations—canvassed white families in 18 States during 12 consecutive months, 1928–31*

	Total complete examinations except infant and child supervision	School examinations of school and preschool children	Other examinations of school and preschool children	Other examinations of older children and adults
Defects found on examination:				
Number known as to presence of defects	2,000	994	498	508
Number reported as having defects	888	544	170	174
Percentage reported as having defects	44.4	54.7	34.1	34.3
Correction of defects after examination:				
Number known as to corrections	847	517	161	169
Number reporting that defects were being corrected	455	199	122	134
Percentage of defectives that were reported as being corrected	53.7	38.5	75.8	79.3
Advice about surgery *to all persons examined:*				
Total known as to advice about surgery	1,658	727	456	475
Number advised to have an an operation	194	114	46	34
Percentage of all examined that were advised to have an operation	11.7	15.7	10.1	7.2
Advice about surgery *to those with defects:*				
Total known as to advice about surgery	546	277	128	141
Number advised to have an operation	194	114	46	34
Percentage of defectives that were advised to have an operation	35.5	41.2	35.9	24.1
Surgery following advice to operate:				
Number known as to performance of surgery	183	107	43	33
Number who had an operation	30	9	11	10
Percentage of those advised to have surgery who had an operation	16.4	8.4	25.6	30.3

A record was made of the number of persons who were advised to have surgery. Of all persons examined, 12 percent were advised to have a surgical operation. In the school examinations this percentage was 16, as compared with 10 and 7 in the two other classes of examinations. Of those persons found to have defects, 36 percent were advised to have a surgical operation. In the school examinations

[10] In Detroit school examinations of children from second grade through high school in 1929-30, 40 percent of the individuals were found to have defects (3).

this percentage was 41, as compared with 36 and 24 in the other two classes of examinations. Of those persons advised to have surgery, 16 percent reported that they had followed the advice by having an operation. In school examinations only 8 percent had taken the advice and had an operation. In the other examinations of school and preschool children, 26 percent had taken such action; and in the examinations of older children and adults, 30 percent of those advised to have surgery had had an operation.

SUMMARY

Records of all medical care were obtained on 8,758 white families in 130 localities in 18 States for a period of 12 consecutive months between February 1928 and June 1931. Each family was visited at intervals of 2 to 4 months to obtain the record.

The surveyed families include representation from nearly all geographic sections, from rural, urban, and metropolitan areas, from all income classes, and of both native- and foreign-born persons. The proportions of these various elements included are not identical with those included in the population of the United States, but the variations are not generally large. In other respects also the surveyed group is not dissimilar to families in the general white population of the United States.

It was found that 48 percent of the persons under observation had one or more calls to a physician, and 62 percent had one or more calls for medical, dental, or eye care during the year. The great majority of the consultations were for illness, all health examinations amounting to only 9 per 100 persons. This represents about one tenth of the usual number considered adequate for good medical care (11). Of the 91 physical examinations per 1,000 persons, 78 were complete and the others were check-ups of a particular part of the body. Chest and lung examinations constituted about half of all check-ups. Eye refractions and prenatal and post-partum check-ups are not included in this paper.

The frequency of examinations varies a great deal with age (fig. 2). The highest rates are for infants and school children, with the preschool ages only slightly below the school ages. Among adults the rates gradually rise to a maximum at 60 to 64 years, but this peak is far below the rates for children.

Examination rates are higher for females than for males at all ages under 55; above that age the reverse is true (fig. 3).

Fewer complete but more check-up examinations (exclusive of prenatal and post-partum check-ups) were reported among married than among single persons.

Physical examinations are more frequent in families with larger incomes than in those of the lower income classes. The differences are

greatest among persons over 45 years of age. At the school ages little or no difference appears (fig. 4).

Persons in professional occupations have more frequent examinations than skilled or unskilled laborers. Merchants, business men, clerks, and salesmen fall between the two extremes (fig. 5).

No consistent differences were found in the frequency of examinations in urban and rural areas.

A higher proportion of persons who were sick three or more times during the year had health examinations (exclusive of care for illness) than persons who were not sick. Persons sick once or twice fall between the two extremes. These statements are true for specific ages and income classes (figs. 6 and 7).

Of all physical examinations, 55 percent were made in public clinics. In contrast, only 5 percent of all cases of illness that had an attendant were treated in public clinics. Between these two extremes come immunizations (all kinds) with 42 percent in public clinics, prenatal care and post-partum examinations with 16 percent, and dental care with 7 percent in public clinics. Only 3 percent of all eye refractions were done in public clinics (fig. 8).

Considered by age, a high percentage of the examinations of children are made in public clinics (including school examinations), but among adults the greater part are made in private practice (figs. 9 and 10).

Only 3 percent of the examinations included X-ray service, and 7 percent had one or more laboratory procedures, including 5 percent with urinalyses.

In 44 percent of the examinations, defects were reported as being present. Of the persons with defects, 54 percent reported that some action was being taken to correct these conditions. Of those who had defects, 35 percent were advised to have a surgical operation, and of those so advised 16 percent reported that surgery had been done.

Finally, it may be said that at present the "annual health examination" exists more in theory than in fact. Less than 4 percent of adults had an examination of any kind during the year. If an important weapon in the control of tuberculosis, cancer, and other diseases of adult life lies in early diagnosis by periodic examination—as many health authorities believe—then it is evident that there is a wide field here for the extension of public-health activities, especially in the lower economic levels.

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COURT DECISION ON PUBLIC HEALTH

Undulant fever held compensable under workmen's compensation act.—(Idaho Supreme Court; *Crowley* v. *Idaho Industrial Training School et al.*, 26 P.(2d) 180; decided Oct. 19, 1933.) An employee of the Idaho Industrial Training School, who was classified as an instructor of dairying, was required by his duties to care for a herd of dairy cows at calving time and, after the calves were born, to treat the cows with disinfectants by inserting his hand and arm into the bodies of the animals. Some of the cows in the herd were infected with contagious abortion. The employee contracted undulant fever and sought compensation therefor under the workmen's compensation act. The supreme court affirmed a finding by the trial court that the injury

for which compensation was claimed was an accident arising out of and in the course of the employment, stating, in part, as follows:

Appellants' first assignment of error presents the question of law as to whether, under the facts and findings, the alleged injury for which respondent seeks compensation is a compensable accident arising out of and in the course of his employment, or an occupational or industrial disease or sickness not arising out of and in the course of his employment and not compensable. * * * We cannot say from the record before us that there is not sufficient competent evidence to sustain the court's finding that the injury received by respondent resulted from the exposure to the disease by the method necessarily followed in treating the cows. * * * Respondent's treatment of the cows, as found by the court, was an incidental duty among other numerous duties he was required to perform as a dairy instructor. There is evidence that the usual source of undulant fever infection is through the human digestive tract from taking raw fat or milk, and that contracting it by coming in contact with cows carrying the germ is not prevalent nor is it a condition frequently met. The evidence bears out the conclusion that the contracting of undulant fever is not inherent in the handling of cows, nor is it the customary or usual result or concomitant of the occupation and mode of work followed by respondent.

* * * * * * *

If the injury sustained by respondent was not one inherent to his occupation as commonly understood, but an accident as used in the popular and ordinary sense of the word, as denoting an unlooked for mishap or untoward event which is not expected or designed, his recovery cannot be denied upon the theory that the injury resulted from an occupation disease and not from an accident. We are inclined to the view that the proper rule to be applied in the case at bar is announced in the case of *Reinoehl* v. *Hamacher Pole, etc., Co.*, 51 Idaho 359, 6 P. (2d) 860; *Ramsay* v. *Sullivan Min. Co.*, supra.

DEATHS DURING WEEK ENDED FEB. 17, 1934

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Feb. 17, 1934	Corresponding week, 1933
Data from 86 large cities of the United States:		
Total deaths	9,780	8,893
Deaths per 1,000 population, annual basis	13.6	12.4
Deaths under 1 year of age	623	640
Deaths under 1 year of age per 1,000 estimated live births	58	[1] 55
Deaths per 1,000 population, annual basis, first 7 weeks of year	12.6	12.7
Data from industrial insurance companies:		
Policies in force	67,515,644	69,031,839
Number of death claims	11,810	12,767
Death claims per 1,000 policies in force, annual rate	9.1	9.6
Death claims per 1,000 policies, first 7 weeks of year, annual rate	10.7	11.5

[1] Data for 81 cities.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended Feb. 24, 1934, and Feb. 25, 1933

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Feb. 24, 1934, and Feb. 25, 1933

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933
New England States:								
Maine		2	2	114	2	4	0	0
New Hampshire			1		222		0	0
Vermont		1			27	1	0	0
Massachusetts	5	25		10	1,807	282	0	0
Rhode Island	1			2	6	1	0	0
Connecticut	2	6	6	24	30	189	0	1
Middle Atlantic States:								
New York	40	50	[1] 16	[1] 45	1,047	2,985	6	3
New Jersey	11	15	23	38	408	935	0	1
Pennsylvania	58	61			2,082	1,143	3	3
East North Central States:								
Ohio	33	33	119	228	449	625	3	0
Indiana	38	34	108	68	691	23	3	0
Illinois	34	61	33	175	968	237	7	18
Michigan	4	25	8	17	67	1,004	2	1
Wisconsin	16	5	78	197	1,024	393	2	1
West North Central States:								
Minnesota	13	2	2	3	207	1,135	1	1
Iowa [3]		9	14		86		0	2
Missouri	52	29	206	20	1,408	202	8	5
North Dakota	8	8	10	10	36	81	1	0
South Dakota		3		17	624	10	0	1
Nebraska	4	8	27	15	22	13	0	0
Kansas	9	9	2	9	125	222	3	0
South Atlantic States:								
Delaware	2	4			167	6	0	1
Maryland [3]	11	11	24	86	318	7	0	0
District of Columbia	4	5	2	5	473	2	0	0
Virginia	22	16			1,131	288	5	3
West Virginia	16	13	80	40	26	446	1	0
North Carolina	25	18	77	143	3,230	502	0	3
South Carolina	6	8	880	1,464	529	167	0	0
Georgia [3]	14	6	206	400	1,880	102	1	0
Florida	8	14	2	384	114	15	0	1
East South Central States:								
Kentucky	32	12	108	82	374	22	3	3
Tennessee	9	8	112	81	975	31	3	3
Alabama [3]	41	18	253	123	836	20	1	0
Mississippi [3]	10	9					0	2

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Feb. 24, 1934, and Feb. 25, 1933—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933
West South Central States:								
Arkansas	10	10	89	70	473	88	3	0
Louisiana	22	22	11	7	128	43	0	2
Oklahoma [4]	14	17	169	154	432	23	2	3
Texas [3]	129	55	825	251	2,028	521	2	1
Mountain States:								
Montana [3]	2		64	99	32	105	1	0
Idaho				5	28	92	0	0
Wyoming	1				65	3	0	0
Colorado	2	4		53	78	7	0	3
New Mexico	5	10		5	135	3	1	0
Arizona	1	4	26	3	22	17	0	1
Utah [3]		2			725	3	0	0
Pacific States:								
Washington	2	3		2	200	31	2	0
Oregon [3]	6	4	62	74	55	100	0	0
California	38	39	38	114	1,154	719	2	1
Total	760	698	3,683	4,637	26,946	12,848	66	64

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24 1934	Week ended Feb. 25, 1933
New England States:								
Maine	0	0	18	36	0	0	1	2
New Hampshire	0	0	17	51	1	0	0	0
Vermont	1	0	11	15	0	1	0	2
Massachusetts	0	0	237	371	0	0	0	0
Rhode Island	0	0	11	36	0	0	0	0
Connecticut	0	0	44	137	0	0	0	0
Middle Atlantic States:								
New York	0	2	780	882	0	0	7	5
New Jersey	0	0	179	314	0	0	6	2
Pennsylvania	0	0	779	843	0	0	8	3
East North Central States:								
Ohio	0	0	689	750	1	9	11	2
Indiana	0	0	248	170	1	4	2	0
Illinois	1	2	632	484	8	4	3	6
Michigan	0	1	486	530	1	3	3	3
Wisconsin	0	2	230	123	50	16	1	2
West North Central States:								
Minnesota	0	0	74	89	5	0	3	3
Iowa [3]	0	0	71	62	2	37	2	1
Missouri	0	0	143	133	2	0	6	1
North Dakota	0	0	54	15	0	3	0	0
South Dakota	0	0	10	10	0	0	0	0
Nebraska	0	1	17	25	2	0	0	0
Kansas	0	0	80	65	0	0	2	1
South Atlantic States:								
Delaware	0	0	13	4	0	0	0	1
Maryland [3]	0	0	73	122	0	0	1	7
District of Columbia	0	0	25	12	0	0	0	0
Virginia	0	0	44	45	1	0	6	4
West Virginia	0	0	79	31	0	0	6	7
North Carolina	1	0	46	36	0	0	0	6
South Carolina	0	1	7	3	3	0	3	1
Georgia [3]	0	0	12	9	0	0	10	1
Florida	0	0	2	7	0	0	2	4
East South Central States:								
Kentucky	1	0	96	38	0	0	6	3
Tennessee	0	1	40	47	2	0	4	2
Alabama [3]	0	0	21	10	0	14	3	3
Mississippi [3]	0	0	14	8	0	3	2	2

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Feb. 24, 1934, and Feb. 25, 1933—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933	Week ended Feb. 24, 1934	Week ended Feb. 25, 1933
West South Central States:								
Arkansas	0	0	8	15	0	16	2	3
Louisiana	0	0	42	8	2	0	6	17
Oklahoma [4]	0	0	20	22	7	0	4	4
Texas [2]	2	0	142	40	44	44	18	3
Mountain States:								
Montana [5]	0	0	10	19	0	0	2	4
Idaho	0	0	18	0	1	14	0	0
Wyoming	0	0	6	5	1	0	0	0
Colorado	0	0	39	39	4	0	0	0
New Mexico	1	0	24	12	0	0	0	1
Arizona	0	0	17	17	0	0	2	0
Utah [3]	0	0	9	11	1	0	0	0
Pacific States:								
Washington	0	1	62	58	2	7	2	1
Oregon [5]	0	0	40	17	5	2	2	3
California	5	0	271	196	5	44	4	5
Total	12	11	5,999	5,972	151	221	140	115

[1] New York City only.
[2] Week ended earlier than Saturday.
[3] Typhus fever, week ended Feb. 24, 1934, 19 cases, as follows: Georgia, 8; Alabama, 7; Texas, 4.
[4] Exclusive of Oklahoma City and Tulsa.
[5] Rocky Mountain spotted fever, week ended Feb. 24, 1934, 4 cases, as follows: Montana, 3; Oregon, 1.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
January 1934										
Alabama	4	137	392	75	813	8	3	104	3	33
Arizona	10	16	116	-------	203	1	1	97	3	5
Florida	1	55	10	29	126	3	0	32	0	12
Idaho	-------	4	4	-------	360	-------	0	48	16	7
Illinois	36	178	148	7	881	-------	5	2,219	9	30
Louisiana	4	116	57	138	127	7	3	122	9	45
Maryland	-------	56	141	-------	265	-------	0	407	0	11
Ohio	5	248	266	1	2,471	-------	5	2,549	3	27
Pennsylvania	14	353	-------	1	5,114	3	4	3,097	0	51
Rhode Island	-------	16	2	-------	13	-------	0	104	0	2
Washington	4	10	89	-------	2,257	1	11	188	18	8

January 1934

	Cases
Chicken pox:	
Alabama	189
Arizona	86
Florida	138
Idaho	40
Illinois	2,332
Louisiana	129
Maryland	675
Ohio	2,897
Pennsylvania	5,753
Rhode Island	135
Washington	539
Diarrhea:	
Maryland	12
Diarrhea and enteritis:	
Ohio (under 2 years)	37
Dysentery:	
Alabama (amoebic)	2
Arizona	5
Florida	1
Illinois (amoebic)	80
Illinois (amoebic carriers)	420
Illinois (bacill. ry)	7
Louisiana	8
Maryland	6
Ohio	17
Pennsylvania	12
Washington (amoebic)	7
Food poisoning:	
Ohio	22
German measles:	
Arizona	50
Illinois	41
Maryland	19
Ohio	703
Pennsylvania	142
Rhode Island	3
Washington	7
Hookworm disease:	
Louisiana	13
Maryland	1
Impetigo contagiosa:	
Maryland	48
Washington	2
Lead poisoning:	
Illinois	4
Leprosy:	
Illinois	1

January 1934—Continued

	Cases
Lethargic encephalitis:	
Alabama	3
Illinois	7
Ohio	4
Pennsylvania	6
Washington	5
Mumps:	
Alabama	32
Arizona	14
Florida	32
Idaho	1
Illinois	876
Louisiana	4
Maryland	151
Ohio	324
Pennsylvania	1,730
Rhode Island	5
Washington	508
Ophthalmia neonatorum:	
Alabama	1
Illinois	10
Maryland	3
Ohio	59
Pennsylvania	13
Washington	1
Paratyphoid fever:	
Illinois	1
Ohio	3
Washington	1
Puerperal septicemia:	
Illinois	8
Ohio	2
Rabies in animals:	
Alabama	102
Illinois	26
Louisiana	15
Washington	5
Rabies in man:	
Illinois	1
Pennsylvania	1
Scabies:	
Maryland	3
Septic sore throat:	
Illinois	20
Louisiana	1
Maryland	20
Ohio	285
Rhode Island	2
Washington	2

January 1934—Continued

	Cases
Tetanus:	
Alabama	7
Illinois	2
Louisiana	2
Maryland	2
Ohio	1
Trachoma:	
Alabama	2
Arizona	75
Illinois	2
Ohio	1
Washington	1
Trichinosis:	
Illinois	3
Maryland	1
Tularaemin:	
Florida	1
Illinois	26
Louisiana	9
Maryland	4
Ohio	7
Typhus fever:	
Alabama	27
Florida	3
Illinois	1
Undulant fever:	
Alabama	2
Arizona	1
Illinois	2
Louisiana	9
Maryland	3
Ohio	5
Pennsylvania	5
Rhode Island	1
Washington	6
Vincent's infection:	
Illinois	50
Maryland	9
Whooping cough:	
Alabama	226
Arizona	86
Florida	70
Idaho	7
Illinois	1,449
Louisiana	20
Maryland	577
Ohio	1,690
Pennsylvania	2,565
Rhode Island	102
Washington	585

EPIDEMIC OF CEREBROSPINAL MENINGITIS IN THE ARKANSAS STATE PENITENTIARY

An epidemic of cerebrospinal meningitis occurred in the Arkansas State Penitentiary from December 8, 1933, to January 11, 1934. Four cases, with 3 deaths, and 1 suspected fatal case occurred in Camp No. 1 from December 8, 1933, to January 9, 1934, and 7 cases with 5 deaths occurred in Camp No. 2 from December 25, 1933, to January 11, 1934.

WEEKLY REPORTS FROM CITIES

City reports for week ended Feb. 17, 1934

[This table summarizes the reports received regularly from a selected list of 121 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference]

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland	0	------	0	0	4	3	0	3	0	9	30
New Hampshire:											
Concord	0	------	0	30	1	2	0	1	0	0	15
Manchester	0	------	0	36	1	5	0	0	0	0	7
Nashua	0	------	0	1	0	2	0	0	0	0	--------
Vermont:											
Barre	0	------	0	0	0	0	0	0	0	0	1
Burlington	1	------	0	0	0	1	0	1	1	16	6
Massachusetts:											
Boston	2	------	4	364	41	72	0	11	0	63	285
Fall River	0	------	3	0	5	2	0	1	0	5	29
Springfield	1	------	0	3	1	4	0	1	1	8	42
Worcester	0	------	1	51	9	9	0	3	0	7	67
Rhode Island:											
Pawtucket	3	------	0	0	0	0	0	0	0	0	0
Providence	1	------	1	1	12	7	0	1	0	24	79
Connecticut:											
Bridgeport	0	------	1	6	2	16	0	2	0	1	35
Hartford	0	------	0	0	8	8	0	1	0	3	33
New Haven	0	------	0	1	5	1	0	0	0	3	49
New York:											
Buffalo	1	------	1	214	23	33	0	8	0	20	161
New York	36	23	15	40	205	250	0	119	1	68	1,837
Rochester	2	------	0	1	1	41	0	1	0	5	90
Syracuse	0	------	0	0	5	5	0	1	0	32	52
New Jersey:											
Camden	2	1	1	73	9	18	0	0	0	4	39
Newark	0	8	0	6	12	23	0	8	0	16	128
Trenton	0	1	1	27	5	11	0	4	0	1	55
Pennsylvania:											
Philadelphia	4	------	0	1,189	57	121	0	36	2	33	593
Pittsburgh	5	9	8	19	23	35	0	17	1	34	221
Reading	2	------	1	4	6	2	0	0	0	3	34
Ohio:											
Cincinnati	4	------	2	358	21	27	0	6	0	19	160
Cleveland	5	49	4	13	24	89	0	12	0	82	242
Columbus	5	3	3	11	8	48	0	5	0	21	110
Toledo	0	1	1	77	9	44	0	6	0	60	91
Indiana:											
Fort Wayne	7	------	0	6	1	13	0	0	1	2	34
Indianapolis	2	------	0	136	23	13	0	7	1	38	--------
South Bend	1	------	2	2	1	9	0	1	1	0	19
Terre Haute	0	------	0	34	1	1	0	0	0	2	24
Illinois:											
Chicago	1	7	2	36	62	264	0	46	1	167	715
Cicero	0	------	0	0	0	0	0	0	0	0	8
Springfield	1	2	0	71	5	2	0	1	0	3	26
Michigan:											
Detroit	4	8	4	9	25	135	0	18	0	102	318
Flint	0	------	0	6	6	70	0	1	0	11	34
Grand Rapids	0	------	0	3	2	14	0	0	1	4	35
Wisconsin:											
Kenosha	1	------	0	1	0	27	0	0	0	5	7
Madison	0	--------		1	--------	10	0	0	0	40	10
Milwaukee	2	1	1	0	3	74	0	3	0	81	97
Racine	0	------	0	0	1	10	0	0	0	11	17
Superior	0	------	0	0	0	0	0	0	0	1	9
Minnesota:											
Duluth	0	------	0	2	3	1	0	2	0	1	20
Minneapolis	3	------	1	6	10	23	0	2	0	28	92
St. Paul	1	------	0	0	8	4	1	3	0	3	56
Iowa:											
Des Moines	0	------	--------	0	--------	15	1	--------	0	0	30
Sioux City	0	------	--------	16	--------	0	0	--------	0	0	--------
Waterloo	0	------	--------	0	--------	0	0	--------	0	6	--------
Missouri:											
Kansas City	5	------	1	1	32	31	0	6	0	7	140
St. Joseph	1	------	0	0	6	0	0	0	0	0	32
St. Louis	20	3	1	807	11	20	0	7	0	68	214

City reports for week ended Feb. 17, 1934—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
North Dakota:											
Fargo	1		1	95	2	0	0	1	0	5	14
Grand Forks	0		0	0	0	0	0	0	0	0	
South Dakota:											
Aberdeen	0		0	2	0	0	0	0	0	0	
Sioux Falls	0		0	14	0	0	0	0	0	0	7
Nebraska:											
Omaha	0		0	87	11	3	0	2	0	12	69
Kansas:											
Topeka	0		0	1	1	4	0	0	1	14	16
Wichita	3		0	0	7	7	0	1	0	5	36
Delaware:											
Wilmington	0		0	43	10	2	0	4	0	6	42
Maryland:											
Baltimore	2	7	1	252	24	44	0	15	1	150	259
Cumberland	0		0	0	1	4	0	0	0	2	18
Frederick											
District of Columbia:											
Washington	5	5	2	413	14	14	0	15	0	20	109
Virginia:											
Lynchburg	2		0	0	3	1	0	0	0	1	13
Norfolk	1	2	0	50	2	8	0	0	0	1	28
Richmond	0		1	2	12	6	0	1	1	2	77
Roanoke	1		3	0	2	2	0	0	0	1	24
West Virginia:											
Charleston	0		0	0	2	1	0	0	0	0	10
Huntington	0		0	0	0	2	0	0	0	0	
Wheeling	0		0	2	6	14	0	1	0	12	27
North Carolina:											
Raleigh											
Wilmington	0		0	2	2	0	0	0	0	6	15
Winston-Salem	1		0	172	1	4	0	2	0	0	21
South Carolina:											
Charleston	0	24	2	35	1	0	0	1	0	1	24
Columbia											
Greenville	0		0	0	1	2	0	0	0	2	7
Georgia:											
Atlanta	10	42	6	265	11	5	0	5	1	3	104
Brunswick	0		0	182	0	0	0	0	1	0	4
Savannah	0	88	1	81	6	1	0	3	0	0	53
Florida:											
Miami	0	1	0	0	6	0	0	0	0	3	40
Tampa	3		0	0	4	0	0	0	0	0	21
Kentucky:											
Ashland	0			0		0	0		0	0	
Lexington	1		0	2	6	0	0	0	0	2	21
Louisville	3	4	1	5	23	31	0	2	0	39	140
Tennessee											
Memphis	2		7	356	14	12	0	5	0	2	101
Nashville	0		3	149	7	10	0	5	0	0	75
Alabama:											
Birmingham	1	12	5	24	15	4	0	5	0	10	86
Mobile	1		1	3	4	0	1	1	0	0	36
Montgomery	0			9		2	0		0	2	
Arkansas:											
Fort Smith	1			89		1	0		0	0	
Little Rock	0		0	87	3	0	0	2	0	0	5
Louisiana:											
New Orleans	13	6	5	23	12	10	0	8	2	2	173
Shreveport	0		0	7	11	5	0	3	0	0	40
Oklahoma:											
Tulsa	3			49		2	0		0	3	
Texas:											
Dallas	8	2	2	0	15	9	0	3	3	4	79
Fort Worth	4		0	1	8	3	0	1	0	3	39
Galveston	4		0	0	2	5	0	0	0	0	16
Houston	4		1	6	7	5	3	8	0	0	80
San Antonio	3		4	9	11	13	0	10	1	0	71
Montana:											
Billings	0		0	0	0	2	0	0	0	3	9
Great Falls	0		0	1	1	0	0	0	0	1	5
Helena	0		0	1	0	0	0	0	0	0	3
Missoula	0		0	0	0	0	0	0	0	0	0

City reports for week ended Feb. 17, 1934—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Idaho:											
Boise	0	------	0	0	1	1	0	0	0	0	5
Colorado:											
Denver	1	------	2	14	4	20	0	3	0	112	88
Pueblo	0	------	0	0	5	1	0	0	0	6	11
New Mexico:											
Albuquerque	0	------	0	4	0	3	0	1	0	0	6
Utah:											
Salt Lake City	0	------	1	515	4	7	2	0	0	12	40
Nevada:											
Reno	0	------	0	1	0	0	0	1	0	0	3
Washington:											
Seattle	0	------	2	0	1	14	2	3	1	57	94
Spokane	0	------	------	185	1	1	1	------	0	13	27
Tacoma	0	------	0	17	5	1	0	1	0	10	27
Oregon:											
Portland	0	1	1	4	4	12	0	1	0	1	87
Salem	0	3	0	0	0	0	0	0	0	7	------
California:											
Los Angeles	22	20	0	42	22	60	1	29	1	62	336
Sacramento	0	2	0	3	3	5	0	2	2	8	28
San Francisco	7	7	2	40	8	13	0	13	0	35	159

State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths	
Massachusetts:			
Boston	1	0	0
New York:			
New York	3	4	0
New Jersey:			
Newark	1	0	0
Pennsylvania:			
Pittsburgh	0	1	0
Ohio:			
Cleveland	1	0	0
Toledo	0	1	0
Illinois:			
Chicago	5	1	0
Michigan:			
Detroit	1	0	0
Wisconsin:			
Madison	[1] 1	0	0
Minnesota:			
Minneapolis	1	0	0
Missouri:			
Kansas City	0	1	0
St. Joseph	0	1	0
St. Louis	1	2	0
District of Columbia:			
Washington	0	0	1
Georgia:			
Atlanta	1	0	0
Tennessee:			
Memphis	1	0	0
Louisiana:			
New Orleans	1	0	0
Washington:			
Spokane	1	0	0
California:			
Los Angeles	2	2	2

[1] Nonresident.

Pellagra—Cases: Atlanta, 1; New Orleans, 2; Dallas, 1.
Lethargic encephalitis.—Cases: New York, 1; Kansas City 1.
Typhus fever.—Baltimore, 1 case, 1 death.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—2 weeks ended February 10, 1934.—During the 2 weeks ended February 10, 1934, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada, as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis				1	2	1			2	6
Chicken pox		3		224	488	86	61	21	69	952
Diphtheria		6	3	28	19	14	3	1		74
Dysentery				1						1
Erysipelas				8	5	5	1	1	4	24
Influenza		4		1	16	2			28	51
Lethargic encephalitis					1					1
Measles		1	4	230	26	249	1,139	1	8	1,658
Mumps					193	7	5		176	381
Paratyphoid fever						1				1
Pneumonia		4			31		1		18	54
Poliomyelitis					1				1	2
Scarlet ever	1	5	7	121	258	57	23	24	218	714
Trachoma									11	11
Tuberculosis	1	1	8	139	97	17	40	7	31	341
Typhoid fever			2	40	12		1			55
Undulant fever				1	3	3				7
Whooping cough		37		312	152	26	41	9	34	611

Ontario Province—Communicable diseases—4 weeks ended January 27, 1934.—The Department of Health of the Province of Ontario, Canada, reports certain communicable diseases for the 4 weeks ended January 27, 1934, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Actinomycosis	1		Pneumonia		177
Chancroid	3		Poliomyelitis	1	
Chicken pox	1,184		Scarlet fever	565	5
Diphtheria	29	4	Septic sore throat	2	
Erysipelas	15		Smallpox	1	
German measles	12		Syphilis	199	
Gonorrhea	228		Trench mouth	1	
Influenza	30	7	Tuberculosis	126	34
Lethargic encephalitis		1	Typhoid fever	28	
Measles	208		Undulant fever	6	
Mumps	437		Whooping cough	303	
Paratyphoid fever	1				

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

(NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for Feb. 23, 1934, pp. 276-288. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued Mar. 30, 1934, and thereafter, at least for the time being, in the issue published on the last Friday of each month.)

Cholera

Philippine Islands.—During the week ended February 24, 1934, cholera was reported in the Philippine Islands as follows: Bohol Province—Balilihan, 1 case, 1 death; Calape, 6 cases, 4 deaths; Carmen, 5 cases, 5 deaths; Clarin, 33 cases, 21 deaths; Cortes, 1 death; Inabanga, 19 cases, 8 deaths; Loon, 7 cases, 2 deaths; Tagbilaran, 3 cases, 2 deaths; Talibon, 3 cases, 2 deaths; Tubigon, 18 cases, 15 deaths; Occidental Misamis Province—Jimenez, 1 case; Occidental Negros Province—Calatraba, 1 case, 1 death; Oriental Negros Province—Ayuquitan, 3 cases, 3 deaths.

Siam—Bangkok.—During the week ended February 24, 1934, 1 case of cholera was reported in Bangkok, Siam.